

CLAIMS

1. A peptide of the formula:

(I)

Y-Met-Ser-Thr-Ile-Pro-Lys-Pro-Gln-Arg-Lys-Thr-Lys-Arg-Asn-Thr-Asn-Arg-Arg-Pro-Gln-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

2. A peptide of the formula:

(II)

Y-Pro-Gln-Arg-Lys-Thr-Lys-Arg-Asn-Thr-Asn-Arg-Arg-Pro-Gln-Asp-Val-Lys-Phe-Pro-Gly-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

3. A peptide of the formula:

(III)

Y-Arg-Asn-Thr-Asn-Arg-Arg-Pro-Gln-Asp-Val-Lys-Phe-Pro-Gly-Gly-Gly-Gln-Ile-Val-Gly-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

4. A peptide of the formula:

(IV)

Y-Leu-Pro-Arg-Arg-Gly-Pro-Arg-Leu-Gly-Val-Arg-Ala-Thr-Arg-Lys-Thr-Ser-Glu-Arg-Ser-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

5. A peptide of the formula:

(V)

Y-Thr-Arg-Lys-Thr-Ser-Glu-Arg-Ser-Gln-Pro-Arg-Gly-Arg-Arg-Gln-Pro-Ile-Pro-Lys-Val-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these

groups.

6. A peptide of the formula:

(VI)

5 Y-Arg-Arg-Gln-Pro-Ile-Pro-Lys-Val-Arg-Arg-Pro-Glu-Gly-Arg-Thr-Trp-  
Ala-Gln-Pro-Gly-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other  
chemical entities added to facilitate coupling; Z is a bond, (an)  
10 amino acid(s), or (a) chemical group(s) which may be used for  
linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these  
groups.

7. A peptide of the formula:

(VII)

15 Y-Gly-Arg-Thr-Trp-Ala-Gln-Pro-Gly-Tyr-Pro-Trp-Pro-Leu-Tyr-Gly-Asn-  
Glu-Gly-Cys-Gly-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other  
20 chemical entities added to facilitate coupling; Z is a bond, (an)  
amino acid(s), or (a) chemical group(s) which may be used for  
linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these  
groups.

- 25 8. A peptide of the formula:

(VIII)

Y-Leu-Ser-Gly-Lys-Pro-Ala-Ile-Ile-Pro-Asp-Arg-Glu-Val-Leu-Tyr-Arg-  
Glu-Phe-Asp-Glu-Z-X.

30 Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other

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chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH<sub>2</sub>, or a linkage involving either of these groups.

9. A peptide of the formula:

(LX)

Y-Ile-Ile-Pro-Asp-Arg-Glu-Val-Leu-Tyr-Arg-Glu-Phe-Asp-Glu-Met-Glu-Glu-Cys-Ser-Gln-Z-X.

Where Y is NH<sub>2</sub>, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH<sub>2</sub>, or a linkage involving either of these groups.

10. A peptide of the formula:

(X)

Y-Asp-Glu-Met-Glu-Glu-Cys-Ser-Gln-His-Leu-Pro-Tyr-Ile-Glu-Gln-Gly-Met-Met-Leu-Ala-Z-X.

Where Y is NH<sub>2</sub>, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH<sub>2</sub>, or a linkage involving either of these groups.

11. A peptide of the formula:

(XI)

Y-Ser-Gln-His-Leu-Pro-Tyr-Ile-Glu-Gln-Gly-Met-Met-Leu-Ala-Glu-Gln-

Phe-Lys-Gln-Lys-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

12. A peptide of the formula:

(XII)

Y-Ile-Glu-Gln-Gly-Met-Met-Leu-Ala-Glu-Gln-Phe-Lys-Gln-Lys-Ala-Leu-Gly-Leu-Leu-Gln-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

13. A peptide of the formula:

(XIII)

Y-Leu-Ala-Glu-Gln-Phe-Lys-Gln-Lys-Ala-Leu-Gly-Leu-Leu-Gln-Thr-Ala-Ser-Arg-Gln-Ala-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

14. A peptide of the formula:

(XIV)

Y-Gln-Lys-Ala-Leu-Gly-Leu-Leu-Gln-Thr-Ala-Ser-Arg-Gln-Ala-Glu-Val-Ile-Ala-Pro-Ala-Z-X.

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Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

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15. A peptide of the formula:

(XV)

Y-Glu-Asp-Glu-Arg-Glu-Ile-Ser-Val-Pro-Ala-Glu-Ile-Leu-Arg-Lys-Ser-Arg-Arg-Phe-Ala-Z-X.

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Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

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16. A peptide of the formula:

(XVI)

Y-Leu-Arg-Lys-Ser-Arg-Arg-Phe-Ala-Gln-Ala-Leu-Pro-Val-Trp-Ala-Arg-Pro-Asp-Tyr-Asn-Z-X.

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Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for

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linking and X is OH, NH<sub>2</sub>, or a linkage involving either of these groups.

17. A peptide of the formula:

(XVII)

Y-Val-Trp-Ala-Arg-Pro-Asp-Tyr-Asn-Pro-Pro-Leu-Val-Glu-Thr-Trp-Lys-Lys-Pro-Asp-Tyr-Z-X.

Where Y is NH<sub>2</sub>, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH<sub>2</sub>, or a linkage involving either of these groups.

18. A peptide of the formula:

(XVIII)

Y-Glu-Thr-Trp-Lys-Lys-Pro-Asp-Tyr-Glu-Pro-Pro-Val-Val-His-Gly-Cys-Pro-Leu-Pro-Pro-Z-X.

Where Y is NH<sub>2</sub>, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH<sub>2</sub>, or a linkage involving either of these groups.

19. A peptide of the formula:

(XIX)

Y-Val-His-Gly-Cys-Pro-Leu-Pro-Pro-Pro-Lys-Ser-Pro-Pro-Val-Pro-Pro-Pro-Arg-Lys-Lys-Z-X.

Where Y is  $\text{NH}_2$ , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH,  $\text{NH}_2$ , or a linkage involving either of these groups.

20. A composition comprising at least one of the peptides of claims 1 to 19.

21. A composition comprising at least one of the peptides of claims 1 to 19 attached to a carrier.

22. A method for the detection of antibodies to hepatitis C virus in a biological fluid such as serum or plasma, characterized by contacting body fluid of a person to be diagnosed with any of the peptides of claims 1 to 19 or compositions of claims 20 and 21, and detecting the immunological complex formed between said antibodies and the antigen(s) used.

23. The method of claim 22, characterized in that said detection of said immunological complex is achieved by reacting said immunological complex with a labeled reagent selected from anti-human immunoglobulin-antibodies or staphylococcal A protein or streptococcal G protein or avidin or streptavidin and detecting the complex formed reagent between said conjugate and said reagent.

24. A kit for the detection of anti-hepatitis C virus antibodies in a biological fluid, comprising:

- a composition as defined in either of claims 20 or 21.
- the means for detecting the immunological complex formed.



25. The kit of claim 24, characterized in that said means for detecting said immunological complex comprise anti-human immunoglobulin(s) or protein A or protein G or avidin or streptavidin and means for detecting the complex formed between the anti-HCV antibodies  
s contained in the detected immunological conjugate.

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